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LETTER REGARDING U S EPA REGION VI COMMENTS ON DRAFT RCRA FACILITY INVESTIGATION FOR OFFSITE WEAPONS STORAGE AREA NAS FORT WORTH TX
3/27/1998
U S EPA REGION VI

File: 17G
A.F.

NAVAL AIR STATION FORT WORTH JRB CARSWELL FIELD TEXAS

ADMINISTRATIVE RECORD COVER SHEET

AR File Number 422

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

1998 MAR 27 PM 12:00

March 25, 1998

Mr. Mark A. Weegar, Project Coordinator
Federal Facilities Team
Corrective Action Section
Pollution Control Division, MC-127
Texas Natural Resource Conservation Commission
P.O. Box 13087
Austin, Texas 78711-3087

Dear Mr. Weegar:

The Environmental Protection Agency (EPA) has reviewed the document, "Draft RCRA Facility Investigation Report, Offsite Weapons Storage Area, Carswell Air Force Base, Texas, December 1997". This report was received by EPA on January 26, 1998.

Based on this review, EPA offers the following comments:

1. **Page 1-8, 1.2.4.1 Physical Geography.** Lake Worth is used as a source of drinking water for the City of Fort Worth.

2. **Page 1-14, 1.3.2.2 RCRA Facility Assessment PR/VSI.** The discussion on SWMU 60, the former Low Level Radioactive Waste Burial Site, indicates that plutonium-contaminated swipe samples, rubber gloves, paper bags, and uranium oxide may have been disposed of at this site. During a review of the Final Technical Report for this site the only waste described was luminous dials. This current RFI also identifies low level radiation detected in one of the bunkers. Should samples at the low level radioactive waste burial site have been analyzed for the same radio nuclides as the bunker?

3. **Page 1-20, 1.4.3 Clearance of the EOD Range.** The comment at the end of this paragraph, concerning future use of this area indicates that some type of deed restriction may be needed to restrict future land uses. Is this supported by the analytical data? Since this area is currently being used as a grazing pasture for a local rancher this needs to be clarified and if necessary access to the site should be restricted.

4. **Page 2-1, 2.1 Project Objectives.** Did any of the buildings

have floor drains? Are there oil/water separators on-site? Since there is no mention of a sewer system, how were waste handled at the facilities?

5. **Section 6.0 CONCLUSIONS.** Although elevated levels of some metals exceed Risk Reduction Standard 2 levels, the concentrations are not such that a final decision on cleanup can be made. I understand from the presentation you made at the February BRAC Cleanup Team meeting that additional Synthetic Precipitation Leaching Procedure (SPLP) analysis will be conducted. Depending upon a review of these results the potential cleanup area could be reduced to the Residential direct contact area as shown in Figure V-2. However, this may require additional modification to the Ecological Tier 2 Levels based upon risk management consideration or additional site-specific analyses under a Tier 3 ecological assessment.

   The concentration of metals outside the bunker drains may need to be investigated to ensure that the extent of the contamination has been identified. The same is true of Sample location A3-006, where the concentration of Mercury was 10.9 mg/kg.

6. **Page 6-5, 6.2.3 Facility Surface Contamination Survey Conclusions.** Is there a planned remedy for these buildings?

7. The risk evaluation (or risk assessment screening) typically conducted under TNRCC's Risk Reduction 2 does not generally entail such a detailed process. The evaluation under a Standard 2 normally assumes default assumptions not site-specific exposure parameters. This evaluation is more of a hybrid between a Standard 2 evaluation and a Standard 3 risk assessment since it sometimes utilized site-specific parameters such as acreage of sites, site-specific dermal exposures, differing exposure point concentrations (surface soil concentrations versus combined surface soil and subsurface soil concentrations) etc. At the very least, the media-specific screening values (or CULs) generated in this effort may not be useable for all sites since some values may be unit-specific values.

   There are numerous specific questions or issues that impact the screening levels (risk-based comparison values), proposed cleanup levels, and eventual conclusions. One of these is that the risk evaluation for the groundwater pathway only considered the currently available data from the Paluxy formation and not the shallow aquifer (which is planned to be sampled in the future), the conclusion for this pathway can only be interpreted to be of current not

potential future conditions. Other specific comments are listed below.

8. The conclusions presented in this report are unclear especially the ones dealing with the ecological issues. It would be more beneficial to provide recommendations for follow-up actions such as additional investigations, source removals etc. These recommendations should be followed from narrative interpretation summaries of the quantitative information. At this time, the report does not present concise summaries nor recommendations. It is extremely unclear what Carswell intends to do subsequent to this effort.

9. **Page 2-26. Section 2.4.1 Methodology for Data Quality Assessment.** Data validation or formal evaluation of the data used in this report has reportedly not been conducted. The reason stated in the report is because the data were used only for screening purposes. The data were used to make preliminary conclusions about the conditions of the site. It would not appear prudent to use data that may not be valid to make these determinations. Please clarify this information.

10. **Page 2-28.** Frequency of detection for selection of a chemical as a chemical of concern should also consider the following: 1) number of samples (typically consider a minimum of 10 samples per media matrix per site), 2) relative concentration and toxicity (i.e., detection may be indicative of a "hot spot" or source area), 3) number of samples, 4) presence/absence in other media, 5) associated degradation products, 6) exeedance of ARARs, 7) persistence, mobility, and bioaccumulation, 8) historical evidence and 9) concentration gradient or distance to nearest adjacent sample location.

    TNRCC's Subchapter S, Risk Reduction Standards, Chapter 335 is dated 1993 not 1996 as is referenced in the report. Please clarify.

11. **Figure 4-10. Aquatic Food Web Connections.** It is unclear what this food web represents. Are the species presented in the food web the potential receptors present in the aquatic system or are they to be interpreted to be representative receptor/endpoint species? As was mentioned on page 4-11, section 4.3.2, the screening assessment should best include representative receptors or endpoint species rather than species that could potentially occur at the Offsite WSA. Additionally, the representative receptors or endpoint species should be demonstrated sensitive species in order to

be protective of the majority of species within the specific feeding guild or trophic level. Please clarify.

Additionally, some trophic levels do not have receptor species associated with them. Does this mean that these were not be considered? Please clarify.

12. **Figure 4-11. Terrestrial Food Web.** See comments to figure 4-10.

13. **Page 5-11.** It should be noted that the TNRCC Risk Reduction Rules allow for the use of the 95% Upper Confidence Limit (UCL) for representing the concentration term (or exposure concentration) to show attainment of Risk Reduction Standard 2 not to selection chemicals of concern.

14. **Page 5-17. Section 5.2.2.4 Sensitive Habitats.** The report identifies additional areas that may be considered either wetland habitat or even potential jurisdictional wetlands. The last jurisdictional wetland determination by the U.S. Army Corps of Engineers is reportedly dated 1987. It is recommended that the U.S. Army Corps of Engineers be contacted to determine if a reevaluation of the jurisdictional wetlands needs to be conducted.

15. **Page 5-20. Section 5.2.3 Exposure Pathways and Selection of Endpoint Species.** The tier 1 ecological screen only considered herbivores. The reasons cited in the report were variable diet and large home range. These factors are not a good reason to drop these trophic levels. Subsequent tiers can aid in semi-quantitatively evaluating the impact of these factors to the estimated potential risks. In summary, since every tier builds upon the ecological risk assessment process and the risk management decisions, it is not prudent to exclude relevant trophic levels from consideration.

16. **Page 5-21. Section 5.2.4.1 Tier 2 Level A and B Screening Assessments.** The soil screening benchmarks presented in TNRCC 1996 document are not final benchmarks.

Surface water was not evaluated since data are not currently available.

TRVs for wildlife were DOE benchmarks. Carswell should insure that all the values used are observed No Observed Effect Levels.

Why were avian species not evaluated?

Potential risk to upper vertebrate trophic levels (i.e.,

from ingestion of prey) should have been evaluated.

Benchmarks and representative species are not fully representative of the ecosystem in question and therefore the conclusions may only present a partial picture of potential impacts.

17. **Table 5-6. Derivation of Dermal Toxicity Factors.** The table utilizes a footnote "d" but there is no explanation at the end of the table for this footnote. Please provide an explanation on how the associated values to this footnote were obtained.

18. **Table 5-11. Construction Worker Direct Soil Contact Algorithms for Noncarcinogenic Effects.** The dermal absorption factor mentioned in this table is cited as chemical-specific and table 5-6 is referenced for details. Table 5-6 does not list dermal absorption factors. Please clarify.

    The toxicity value to determine ingestion exposure should not be modified with an absorption fraction unless the absorption fraction was used to derive the toxicity value for that chemical or there is chemical-specific literature data to support the use of the fraction. The chemical-specific literature data should be cited and provided as support. Otherwise, the absorption fraction should be assumed to be 1.0.

19. **Appendix O.** Table O-1 lists the residential groundwater cleanup levels. The values listed reportedly consider the ingestion, inhalation, and dermal route of exposure. However the values may not truly encompass the three exposure routes since footnote 2 sates that inhalation of organic chemicals with Henry's Law Constants and inhalation toxicity factor only (i.e., TCE) was considered. Please clarify if this is the case.

    Tables O-2, O-3, and O-4, list residential groundwater protection cleanup levels presumably addressing the groundwater ingestion, inhalation, and dermal exposure routes. However, the values do not reflect that these routes of exposure were actually considered in the calculation. Please clarify.

Please contact me at (214)665-8306 should you wish to discuss this further.

Sincerely,

Gary W. Miller

Gary W. Miller
Senior Project Manager
Base Closure Team

cc: Mr. Rafael Vazquez
Air Force Base Conversion Agency
HQ AFBCA/DC

cc: Mr. Olen R. Long, (BEC/BTC)
Air Force Base Conversion Agency
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cc: Mr. Charles A. Rice
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